

ARTICLE VI.

RUPTURE OF THE LEFT FALLOPIAN TUBE AND COPIOUS HEMORRHAGE INTO THE PERITONEAL CAVITY. By J. F. HARTIGAN, M.D., of Washington, D. C.

CASE I.—Mrs. S. T., coloured, æt. 33, mother of five children, youngest sixteen months old, menses irregular since its birth; was seized on the morning of September 12, 1881, with a sudden sharp pain low down in the abdomen; menstruation was a month overdue, and she remarked that this was perhaps its beginning; such belief was heightened the next day by a normal show which lasted up to death; there were no symptoms of pregnancy. She was well up to this time except that, her husband says, a few nights before in bed she felt cold and chilly, although the room was very warm, and requested him to put the window down; also, when he was leaving the house to go to work the morning of her attack, she expressed a desire to lay aside her laundry labours and take two weeks' rest.

When the pain seized her she had a cup of coffee in her hands getting breakfast; it continued growing worse, and felt, as she said, like labour pain. She, however, kept going about, complaining all the time, and would occasionally sit and lie down and go to work again; her strange conduct and actions in the mean time excited anxiety, and two days before her death great pallor was noticed, and she talked in a rambling way, indeed, as her sister said, she felt and looked as if she would die.

This state of things continued until the morning of the 17th, when she caught herself and exclaimed, "Oh, Lord! my stomach, that pain that I have been complaining of for a week is almost cutting me in two." She lay on the floor on her abdomen, steadily grew worse, and was then carried to a lounge. Dr. Winter was summoned, who soon afterwards found her unconscious in collapse, death ensuing about 5 P. M.

At the *autopsy* the next day the quantity of blood in the abdominal cavity was amazing; becoming satisfied that no large vessel was ruptured, some difficulty was experienced in learning the source of the hemorrhage. After sponging out the abdomen this was discovered by a clot protruding through what appeared upon examination, as the specimen shows, a rupture of the left Fallopian tube on its superior aspect, irregular in shape, one-fourth inch long, and an inch from the uterus; there was partial dilatation and attenuation of the walls of the tube in its middle; the finest probe would not penetrate the ostium internum; the ostium abdominale was open. The uterus was enlarged, five inches long, and empty, its rugæ, however, and lower garments of the woman, were found slightly tinged with the menstrual flow before referred to. There was also a true corpus luteum, of a dusky hue, included, perhaps, in one-sixth of the left ovary. Other organs normal.

The interest attached to the specimen led me to examine into its literature through the unsurpassed facilities of the index catalogue of the Army Medical Library; I am also indebted to Dr. Lamb and Mr. Z'glinitzki for translations.

CASE II.—The first reference to this subject, although not exactly an analogous case, is found in De Haen's *Ratio Medendi*, vol. iii., 1764, p. 31. The patient, who was 24 years old, had never menstruated, but had since the age of sixteen suffered with a hard swelling in the hypogastrium, which formed in the beginning an extremely hard but uniform zone around the umbilicus, and finally encompassed

the entire abdomen. After eight years of acute suffering it was discovered that she was afflicted with atresia. In 1761 an operation was determined upon by means of an incision into the hymen, when a great quantity of black blood escaped followed by death in a few hours.

The *autopsy* showed enormous moles of the uterus, and both sides of the monstrous tube formed together one solid mass that filled the whole hypogastrium. The abdominal cavity was filled with black, turbid, offensive fluid, which proved to have issued from small apertures of the decayed tube.

CASE III. (*Journal Universel des Sci. Medical*, Paris, vol. xxx., 1823, p. 100.)—Dr. Godelle reports a case, married, of rupture of right tube, supposed to have occurred in a rage, at the time of menstruation.

CASE IV. (*Sommaire des Trans. de la Soc. des Sciences Méd. du Dept. de la Moselle*, Metz, 1830–8, p. 63.)—Patient, æt. 38; no children; rupture of left tube three weeks over expected period. What appeared to be decidua was found in uterus. Rupture believed to be result of arrest of ovule in the tube.

CASE V.—A case is reported by William Munk, M.D., in the *London Med. Gazette*, vol. xxvii., 1841, p. 867. Patient, æt. 18, was found in articulo mortis, and died in a few hours; had never menstruated. Eighteen months before, at puberty, she suffered from headache, pain in the back and limbs, cold extremities, and dragging sensation in pelvic region. These symptoms soon subsided, but returned in five weeks; again ceased and then returned after a shorter interval. This state of things continued three or four months, the symptoms upon each recurrence remaining longer, whilst intermissions became shorter, so that at last there was no intermission but exacerbations occurring every fourth or fifth week. In January the lower part of the abdomen began to swell; pain in the pelvis, vomiting, and all the symptoms aggravated. In a few days, when stooping, she felt something give way within her, and the swelling and pain subsided temporarily. She died in four days.

Autopsy showed a large quantity of dark-red thickish fluid in the abdomen. Uterus larger than a man's fist and flaccid. On opening it found three or four ounces of same kind of fluid. Fallopian tubes distended so as to admit the little finger. A fissure about two inches in length was found near the fimbriated extremity of left tube, accounting for hemorrhage.

CASE VI. (*Casper's Wochenschrift*, 1846, Berlin, p. 325.)—A case is reported showing rupture of left tube six weeks after menses; patient was 37, married, and had children. The author attributed rupture to tubal pregnancy. A coagulum resembling a mole was found in uterus which was enlarged on ruptured side. Ostium internum closed.

CASE VII.—In the *Provincial Med. and Surg. Jour.*, London, 1848, p. 104, a case is reported by Mr. Russell, presented before the Birmingham Pathological Society, showing rupture of the left tube, supposed during the passage of an ovum, in a young newly married woman two weeks after menstruation. Mr. R. found her in collapse, abdomen tympanitic and tender; she referred her pain chiefly to præcordia; died in a few hours.

At the *autopsy* blood was found in abdomen and pelvis; the rupture was near junction of middle and inner third, the walls of ruptured portion thin and distended by a mass of fibrin in which no ovum was discoverable. Uterus enlarged and contained a deposit of decidua.

CASE VIII. (*Gaz. des Hôp.* Paris, 1847, p. 155.)—Case 36 years old, one child. The right tube was ruptured and dilated to the size of finger—tube contained clots—bloody mucus in uterus. Some days before death, had attendant catamenial discharge.

CASE IX.—In the *Bulletin de l'Académie de Médecine*, Paris, vol. xxi., 1855–6, p. 21, a case is reported during catamenial flow, æt. 39, mother of four children. Left tube was found ruptured at junction of inner third with outer two-thirds; the internal third for half its length was dilated and contained a blood clot. No tubal pregnancy. No trace of blood in uterus.

CASE X.—In Warren's *Surgical Observations*, 1858, p. 292, a case, æt. 40, is reported of rupture of left tube from retained menstrual fluid on account of occlusion of the uterus. There was no communication between tube and uterus. Patient had a very severe confinement four years previously, and had not menstruated since.

CASE XI.—A case is reported in the Extracts from the Records of the Boston Society for Medical Improvement, by Dr. F. Minot (*Boston Med. and Surg. Journ.* vol. lxiv., 1861, p. 249).

Autopsy, by Dr. L. R. Stone, showed rupture of the left Fallopian tube and copious effusion of blood into the peritoneal cavity in a non-pregnant woman. Patient was 19 years old, and had one child a year and a half old. The morning she was seized she got up as usual perfectly well, and dressed her child; went out a few minutes, came back and threw herself on the bed, complaining of pain in the abdomen, coldness and thirst, feeble pulse, and great pallor. She died the same evening. About two quarts of blood was found in abdomen; uterus not enlarged. Fallopian tubes more injected than the uterus, but neither of them was distended nor discoloured. The left tube in its upper and posterior part, midway, showed an opening through its entire thickness, about one-quarter of an inch long, and from this opening there hung a coagulum. Nothing like an ovum was anywhere found. The tube having been cut open it was found it could be inflated from the fimbriated extremity, and pass a probe in from the uterus to near the seat of rupture, but nothing more was observed than would be seen in the unimpregnated condition. There was a large spurious corpus luteum in left ovary, and a smaller one in the right. There was a glairy mucous secretion in the cavity of the uterus, and profuse leucorrhœal discharge in the vagina. The catamenia was always regular, and the sister, who slept with the patient, reports that she was not menstruating at the time of her death, but was daily expecting to.

CASE XII. (*Medicins Correspondenz Blatt.*, vol. xxxiv., 1864, p. 110.)—Dr. Lechler reports a case 28 years old; married 8 months; healthy; menstruated regularly, period five days overdue; thought she was pregnant. Was attacked suddenly after sleep while making her bed, and died in a few hours. At the autopsy there was observed great anæmia, and a large mass of blood in abdomen; left tube distended to size of walnut, with thin walls and blood clot; rent in anterior upper side. Uterus that of a virgin, healthy and empty. No trace of ovum was found.

CASE XIII. (*Trans. N. Y. Obst. Soc.*, 1876–8, p. 156.)—A specimen, taken from a lady æt. 30, was presented by Dr. H. D. Nicoll, showing rupture of the left tube. She suffered from retroversion for several years; had had two children within two years before death—labours normal. Last menstruation occurred two weeks ago and was scanty. Since that time she had slight abdominal pains. On the morning of her death, immediately after sexual intercourse, she experienced a sudden violent pain in the lower part of the abdomen, followed by syncope and unconsciousness; was pulseless at the wrist. A vaginal examination revealed distinct fluctuation in Douglas's cul-de-sac. She rallied a while after restoratives, but again became collapsed and pulseless, dying in 12 hours from attack.

Autopsy showed abdominal cavity absolutely filled with blood, chiefly coagulated, both ostium internum and abdominale open. Viscera anæmic. The uterus was large and the mucous membrane tumefied, and ovaries contained each a corpus luteum. The rupture took place half an inch from uterus; tube was swollen to the size of a hazel-nut, the opening being one-quarter of an inch long on the posterior aspect, and containing coagulum.

The pathologist, Dr. M. D. Mann, after describing the conditions found, concludes as follows: "We are forced by the resemblance of this to other described cases, by the presence of the corpus luteum, and by exclusion, to consider this as a case of tubal pregnancy. The absence of the ovum, and the failure in the development of the uteri decidua, usually seen in these cases, may cast some doubts on the diagnosis. But we can easily account for the absence of the ovum by supposing that it was expelled through the rent in the walls of the sac at the time of the hemorrhage and lost among the clots. We cannot imagine any other conditions which could have produced similar results. Disease of a vessel with apoplexy, an ulcerative action in the mucous membrane opening into a vessel, formation of an abscess in the tube, with subsequent rupture, are all easily excluded, on account of the healthy condition of the other tube, and the remaining portion of this."

CASE XIV.—Dr. A. E. A. Lawrence reports the following case in the *Trans.*

Obst. Soc. London, vol. xx., 1879, p. 292. Patient was admitted into the Bristol Gen. Hospital, suffering from endometritis, and for this he applied nitric acid to the interior of the uterus, after previously dilating the cervix with a tangle tent. The woman did well for four days, when peritonitis set in, and she died in three days. The *post mortem* showed peritonitis most marked in pelvic region. The left Fallopian tube was dilated into a cyst, the right was much dilated and thickened, and had given way; the interior of the uterus presented usual appearance of granular endometritis. The doctor did not attribute the fatal termination to the acid application; but he believed the immediate cause of the rupture was probably due to over-distension by menstrual secretion. Menstruation was coincident with the development of peritonitis.

CASE XV.—In the *Lancet* for 1879, vol. ii. p. 120. By Henry Fisher, M.D., rupture of both tubes is reported during labour. Woman 40, and feeble, temperate, and healthy; 5 children.

CASE XVI.—In the *Lancet* for 1880, vol. i. p. 525, a case is reported by C. J. R. Owen, M.R.C.S. Patient aged 39; married 20 years; had 4 children, youngest 21 months; no miscarriages; taken ill Jan. 8, 1880. Had rheumatic fever when young, but heart was not affected. Catamenia began at 14; natural every 4 weeks, latterly every 3 weeks; has lately grown fat, and her strength was severely taxed from nursing a sick child; last period was natural, but ever since has suffered much from pains in the back and stomach. January 7th she thought her period had come on, but as there was only a slight show, concluded it had passed off. Next morning she had been reaching about a good deal, when she suddenly felt "something give" in her right side, and fainted away. In the afternoon when she was first seen, she had been very sick, and only recovered from one faint to go into another. In the intervals she was sensible, and complained of severe pain in right iliac and hypochondriac regions, not increased by pressure. Face and hands cold and moist; no pulse in radial, carotid, or temporal arteries. Tongue clean, pale, and flabby; heart's action intensified; no bruit; chest normal, also abdomen. The doctor conjectured some small vessel had given way, but where, it was impossible to say. Ordinary remedies for collapse were ordered, and at midnight she rallied; pain much less; respiration 36, "sighing;" temperature 96.6° in mouth; radial was now felt at 120. Next day about noon she became unconscious and died soon after.

The *post mortem* showed much adipose tissue on abdomen; lungs and heart healthy. The abdomen was found to be full of thin pale blood; organs healthy, but very pale; from the right side a quart of thick black clots were removed; ovaries small, cystic, and atrophied; left Fallopian tube small. In the right one, one-quarter inch from uterus, an opening of the size of a horse-bean was seen, from which a little fibrinous material was oozing; the tube was enlarged throughout its entire length to the size of a pipe-stem, but where the opening existed it was as large as a No. 10 catheter. Uterus stained and congested near tube, and uterine mucous membrane thickened; the opening was in upper aspect of tube. The absence of peritonitis was thought remarkable, but it was probably due to exhaustion from the hemorrhage. The length of time the patient lived showed the bleeding was from a small vessel. The most plausible theory of the rupture seems to be that the patient caught cold at her period in December; that inflammation of the tube followed, possibly ending in abscess, and that the exertion brought about the fatal result.

CASE XVII.—Mr. Marsh, who made the autopsy, said before commencing the operation, that the last private examination he had made was on the body of a young unmarried lady who had caught cold at her period, and died from rupture of the Fallopian tube; and here also there was no peritonitis. He had never seen a similar case out of many thousand *post mortems*.

CASE XVIII.—A case by Dr. Godson, presented before the Obstetrical Society, appears in the *London Med. Times and Gaz.*, vol. i., 1880, p. 193. The patient, æt. 30, was married two months; menstruation had been regular; the period commenced four days before her death at its proper time. During this day whilst walking she suffered acute pain in the left iliac region, nearly fainting. This passed off, but recurred four days after while menstruating. Collapse and the general signs of internal hemorrhage followed, and she died in twelve hours.

Autopsy showed abdominal cavity to be full of fluid blood with large clots in

the pelvic portion. The left Fallopian tube was found distended in one part to the size of a small walnut, on the anterior aspect of which was a small irregular rent, which led into a cavity in the centre of what appeared to be organized blood clots. No evidence of an ovum could be discovered. The right ovary showed a well-marked corpus luteum. In the discussion that arose there was a difference of opinion as to whether or not tubal pregnancy existed. Dr. Godson could trace no signs, but he failed to account for the distension of the tube, both ends of which were patent.

CASE XIX.—In *New York Med. Journ.*, 1880, p. 522, is reported the case of a French woman, 49 years old, who had several children, complained of obstipation of fourteen days' duration. The *autopsy* showed signs of general peritonitis, and at the bottom of peritoneal cavity were found twelve ounces of pus. The right tube was dilated by a collection of pus, a rent in the sac showing the point where it had discharged. The left tube was also inflamed and dilated with exudation, but had not ruptured.

In the *St. Thomas Hospital Museum Catalogue*, London, vol. iii. p. 227, are found several specimens chiefly of cystic dilatation or degeneration, with occlusion of the tube.

The *post mortem* in the case of Miss Neilson, the actress, by Dr. Brouardel (*Med. Record*, vol. xviii., 1880, p. 363), disclosed rupture of a varicose vein in the left Fallopian tube, supposed to have occurred in her writhing. Two quarts and a half of blood were found in the peritoneal cavity, and the ruptured vein presented an orifice of from four to five millimetres in diameter.

According to Dr. W. E. Johnston, of Paris, for the last five years she had been under his treatment. She suffered principally from gastralgia, incident to dyspepsia, a form fantastic in its coming and going, and in her case dependent on moral causes as well as on errors of diet. Being out of the city, he did not attend her in the fatal attack, but he believed it might have been relieved then, as it often had been before, by a free use of morphine. Twelve hours from the commencement of her attack, during a most violent recurrence of the pain, she suddenly ceased to complain, went into a state of syncope, and died.

I have nothing to add in my case further than that I believe it to have been one of arrest of impregnated ovum in the tube. The enlarged uterus, the corpus luteum, and overdue menses, would seem to confirm this view. It may be admitted, also, that the bleeding had been going on slowly from the first moment of the attack, and suddenly increased the day of death. I am not convinced that a violent effort will rupture an organ in repose like a healthy Fallopian tube. If this were so it should occur oftener, for instance, during parturition, when the pressure and exertion combined are greater, perhaps, than in any other contingency. Another feature which must not be overlooked is, that all the ruptures occurred in married women, except the two cases who had never menstruated, and the one mentioned by Mr. Marsh. I cannot find a record of one attending the menstrual flow of a virgin. The interesting question, therefore, arises, can this accident, as claimed in one of the cases cited, and by Churchill and Rokitski, take place in a non-pregnant female without disease, atresia, or occlusion?